

ASSOCIATION OF SOCIETIES FOR GROWING AUSTRALIAN PLANTS

VERTICORDIA STUDY GROUP ISSN-0811-5346

NEWSLETTER NO 24 -- AUGUST 1995.

MEMBERSHIP

A welcome to the following new Study Group Members:

Cheryl Cameron, "Culloden", MS355, Chinchilla, Queensland 4413

Phil. Strong, 6 Jerry Avenue, Charmhaven, N.S.W. 2263

Cheryl lives in a 26" rainfall zone west of the Divide in inland Queensland "with extremes of temperature; -4 degrees last week and days in summer over 40 Celcius. The soil is deep freely draining sandy loam which retains some moisture for long periods."She is interested in trying to establish some Verticordias on a commercial basis and is keen to find out which species can be maintained in her area

Phil has been having good success in the grafting of Grevilleas and aims to see if he can repeat the results with Verticordias He has obtained seed of some species and has been trying "smoke propagation" To date he has raised *V. plumosa*, *V. acerosa* and *V. huegelii* var *huegelii*.

On a sadder note David Andrews, Canley Heights, N.S.W. advises that he will be forced to change his current address shortly and will have to discontinue his membership as it seems most unlikely that he will be able to re-establish a Verticordia Garden.(See Member Reports)

FINANCES 1.7.94 to 30.6.9

Credit Balance 30.6.94	\$225.30
Receipts 94/95	256.00
Expenses 94/95	247.74
Surplus income for year	8.26
Credit Balance 30.6.95	233.56

SUBSCRIPTIONS

The nominal membership fee for 1995/96 will remain unchanged at \$3.00. Your early attention to payment would be appreciated.

If more convenient, advance subscription for year 1996/97 may also be included, but any excess above the current nominal fee will be gladly accepted and regarded as a Donation to the Study Group, unless the intention of Advance Subscription is specifically noted

Failure to respond to financial reminders will result in membership cancellation.

Since the formation of the Study Group Donations by Active Members, Regions and District Groups have been very significant in enabling retention of the nominal subscription as noted and are very much appreciated

DONATIONS

I am very pleased to acknowledge the following donations in excess of our nominal \$3.00 annual subscription

Ernie Koch	\$2.00
Ray Purches	7.00
Graham Eastwood	2.00
Elizabeth George	17.00
SGAP Sth. Aust. Reg Inc	12.00

THOSE NEW VERTICORDIA NAMES

To the early colonists, in their efforts to work the land, the eradication of the Australian Bush (sometimes prickly), represented a major challenge. In suburbia also, the challenge started firstly with "clearing the block" and planting a paling fence. The gap was then filled in with a lawn, a dog kennel and a few well-known shrubs in a corner like Cotoneaster or Geranium. To the latter-day Australian Plant cranks (or enlightened people), who have come to appreciate the world's most diverse and extensive indigenous flora another challenge has been accepted; the growing of many examples of same in our gardens and public places. With increasing popularity a further challenge is facing us; the frequent name changes which are sometimes introduced to old and familiar species in order to correct errors in identification or cover newly discovered taxa. However necessary such name changes and new species names may be, there is sometimes a tendency to react a little by hanging on to the older names with which we have become familiar.

In clearing up the long-term confusion which has existed with the identification of Verticordias, the recent revision by Alex. George greatly expands the number of recognised species and some may find the new names a little daunting. The following, from the Revision papers published in Nuytsia Vol. 7 (3) and Vol. 9 (3) by the Western Australian Herbarium, may do a little to soften the blow:

V. aereiflora. From the Latin *aereus* (bronze) and *flos* (a flower). A reference to the flower colour. The combination of red and yellow gives an overall impression of bronze.

V. albida. From the Latin *albidus*, (whitish). A reference to the sepals and petals, the flowers being whitish with pink centres.

V. amphigia. From the Greek *amphigios*, (pointed at both ends). A reference to the boat-shaped pair of bracteoles subtending each flower.

V. apecta. From the Greek *apektos* (uncombed, unkempt). A reference to the somewhat untidy appearance of the flowers.

V. argentea. From the Latin *argenteus* (silvery). A reference to the prominent silvery white fringe to the sepal lobes.

V. attenuata. From the Latin *attenuatus* (narrowed). A reference to the narrowed, few-fimbriate petal apices.

V. aurea. From the Latin *aureus*, (golden). A reference to the golden colour of the flowers.

V. auriculata. From the Latin *auriculatus*, (auriculate, or with ear-shaped projections). A reference to the prominent fimbriate basal lobes of the sepals.

V. bifimbriata. From the Latin *bi-*(two) and *fimbriatus*, (fringed). A reference to the fringe segments of the petals which are themselves fimbriate.

V. blepharophylla. From the Greek *blepharis* (an eyelash) and *phyllon*, (a leaf). A reference to the long-ciliate leaves.

V. brevifolia. From the Latin *brevis*, (short) and *folium*, (leaf). A reference to the short leaves

V. brevifolia subsp. *stirlingensis*. The Latin suffix *ensis* indicates the place of origin; the Stirling Range.

V. capillaris. From the Latin *capillaris*, (hair-like). A reference to the very slender style.

V. centipeda. A reference to the neatly ciliate leaf margins resembling a millipede or small centipede.

V. chrysanthella. Closely related to *V. chrysantha*, the suffix *ella* referring to the smaller leaves and flowers.

V. chrysostachys var. *pallida*. From the Latin *pallidus*, (pale). A reference to the flower colour which is paler than that of typical *V. chrysostachys*.

V. citrella. From the Latin *citreus*, (yellow or lemon-coloured). A reference to the flower colour. The suffix *ella* is a reference to the small flowers

V. comosa From the Latin *comosus*, (having a tuft of hairs). A reference to the hairs of the style.

V. cooloomia. The name refers to the area where the species occurs.

V. coronata. From the Latin *coronatus*, (crowned). A reference to the prominent staminodes which form a crown-like centre to the flower.

V. crebra. From the Latin *creber*, (numerous, close together). A reference to the crowded leaves.

V. dasystylis. From the Greek *dasys*, (hairy, shaggy). A reference to the very hairy style. (White hairs up to $\frac{3}{4}$ of its length)

V. dasystylis subsp. *kalbarriensis*. The Latin suffix *ensis* indicates the place of origin; the Kalbarri National Park.

V. dasystylis subsp. *oestopioia*. From the Greek *oistos*, (arrow) and *poieo*, (to make or work). A reference to the name of the Arrowsmith River, near which the species occurs.

V. densiflora var. *pedunculata*. From the Latin *pedunculatus*, (pedunculate). A reference to the long peduncles., the longest among varieties of the species.

V. densiflora var. *roseostella*. From the Latin *roseus*, (rose-pink) and *stella*, (a star). A reference to the flower colour and similarity in other features to *V. densiflora* var. *stelluligera*.

V. dichroma. From the Greek *di-* (two) and *chroma*, (colour). A reference to the deep red and golden flower colour.

V. dichroma var. *syntoma*. From the Greek, *syntomos* (shortened). A reference to the smaller groups of flowers and the slightly smaller leaves and flowers.

V. endlicheriana var. *compacta*. From the Latin *compactus* (compact, dense). A reference to the rounded, compact habit of the mature plant.

V. endlicheriana var. *manicula*. From the Latin *manus* (a hand), and the suffix *-iculus* (small). A reference to the small appearance of the petals.. The flowers are the smallest of the species.

V. endlicheriana var. *angustifolia*. From the Latin *angustus* (narrow) and *folium* (leaf). A reference to the narrower floral leaves than other varieties.

V. endlicheriana var. *major*. From the Latin *major* (larger). A reference to the flower size which is larger than for the other varieties.

V. eriocephala. From the Greek *erion* (wool) and *cephala* (head). A reference to the compact massing of flowers over the top of the plant.

V. etheliana var. *formosa*. From the Latin *formosus* (well formed, handsome). A reference to the more compact, showy habit.

V. x eurardyensis. The Latin suffix *-ensis* refers to the area of distribution.

V. fimbrileps subsp. *australis*. From the Latin *australis* (southern). A reference to the more southern distribution of the subspecies relative to typical *V. fimbrileps*.

V. fragrans. The Latin *fragrans* refers to the scented flowers.

V. galeata. From the Latin *galeatus* (hooded). A reference to the large hooded appendage to the anthers.

V. gracilis. From the Latin *gracilis* (slender). A reference to the slender stems and peduncles.

V. halophila. From the Greek *hals* (salt) and *philus* (loving). A reference to the habitat; sub-saline flats, where it is usually found.

V. huegelii var. *decumbens*. The Latin *decumbens* refers to the decumbent growth habit.

V. huegelii var. *tridens*. From the Latin *tri* (three) and *dens* (tooth). A reference to three-lobed staminodes.

V. inclusa. From the Latin *inclusus* (included). A reference to the shortly included stamens and style.

V. insignis subsp. *eiomagis*. From the Latin *eo magis* (so much the more). A reference to both the larger size and the very attractive appearance of the flowers.

V. integra. From the Latin *integer* (whole, entire). A reference to the entire leaves and petals.

V. interioris. From the Latin *interior* (inner, interior). A reference to the inland occurrence relative to most other species of the genus.

V. laciniata. From the Latin *laciniatus* (divided into narrow pointed divisions) A reference to the staminodes.

V. lepidophylla var. *quantula*. From the Latin *quantulus* (how little). A reference to the shortly lobed and little-fimbriate sepals.

V. lindleyi subsp. *purpurea*. From the Latin referring to the typical flower colour.

V. longistylis. From the Latin *longus* (long) and *stylus* (style). The style is the longest in the genus.

V. luteola. From the Latin *luteolus* (pale yellow). A reference to the flower colour.

V. luteola var. *rosea*. From the Latin *roseus* (pink). A reference to the flower colour of the variety.

V. mitodes. From the Greek *mitodes* (threadlike). A reference to the long fringe of the petals.

V. muelleriana subsp. *minor*. From the Latin *minor*. A reference to the smaller flowers than those of typical *V. muelleriana*.

V. multiflora subsp. *solox*. From the Latin *solox* (shaggy, rough). A reference to the much-divided sepals which give the flowers a more shaggy appearance than that of the typical *V. multiflora*.

V. pityrhops. From the Greek *pitys* (a pine) and *rhops* (a shrub). A reference to the small pine-like habit

V. plumosa var. *pleiobotrya*. From the Greek *pleio-*(more than usual) and *botrys* (a bunch) A reference to the many small lateral groups of flowers.

V. plumosa var. *ananeotes*. From the Greek *ana* (again) and *neos* (new, recent). A reference to the plants ability to resprout after fire form it's small woody stock.

V. plumosa var. *vassensis*. The Latin suffix *-ensis* refers to the area of distribution; the Vasse district.

V. plumosa var. *incrassata* From the Latin *incrassatus* (thickened). A reference to the leaves and pedicels.

V. pulchella. From the Latin *pulchellus* (pretty). A reference to the attractive appearance of the plant.

V. roei subsp. *meiogona*. From the greek *meiouros* (smaller) and *gonimos* (fruitful, having generative power). A reference to the shorter stamens and style of the subspecies.

V. rutilastra. From the Latin *rutilus* (red with a metallic lustre) and *aster* (a star). A reference to the appearance of the flower as it ages and turns red.; The petals change first and together appear star-like.

V. serotina From the Latin *serotinus* (late). A reference to the the later flowering period than that of *V. forrestii*, it's closest related species.

V. serrata var. *ciliata* From the Latin *ciliatus* (ciliate). A reference to the prominent cilia of the leaf margins.

V. serrata var. *linearis*. From the Latin *linearis* (linear). A reference to the linear form of the leaves.

V. sieberi var. *lomata*. From the Greek *loma* (a fringe or border). A reference to the fimbriate petal margins.

V. sieberi var. *pachyphylla*. From the Greek *pachys* (thick) and *phyllon* (leaf).. A reference to the very broad, thick leaves.

V. sieberi var. *curta*. From the Latin *curtis* (short). A reference to the short sepals, allowing the petals to dominate the flower.

V. spicata subsp. *squamosa*. From the Latin *squamosus* (scaly). A reference to the small, appressed, imbricate leaves.

V. staminosa subsp. *cylindracea*. From the Latin *cylindraceus* (cylindrical). A reference to the form of the staminal bundle.

V. staminosa subsp. *cylindracea* var. *erecta*. From the Latin *erectus*. A reference to the growth habit.

V. subulata. From the Latin *subulatus* (narrow with a fine point). A reference to the staminodes.

V. tumida. From the Latin *tumidus* (swollen). A reference to the rounded and large swollen appendages to the hypanthium.

V. tumida subsp. *therogana*. From the Greek *theros* (summer) and *ganos* (brightness). A reference to the summer flowering period and the bright pink flowers.

V. venusta. From the Latin *venustus* (charming, lovely). A reference to the appearance of the plant when in flower.

V. vicinella. From the Latin *vicinus* (neighbouring) and *ella*, (the diminutive suffix). A reference to its close relationship to *V. minutiflora* and the very small flowers.

V. wonganensis. The Latin suffix *-ensis* refers to the area of distribution.

MEMBER REPORTS

Ray Purches, Wangaratta. Victoria has sent in the following very welcome first report dated 10.6.95:

"Your excellent Study Group Newsletter No. 23 (thanks Ray), has prompted this small report.

My longest surviving Verticordias here at Wangaratta (on the eastern slopes of the Warby Ranges) are *V. monadelpha* (pink) -8 years, *V. densiflora* -5 years, and *V. plumosa* - 6 years (the form that looks dead and then revives in autumn).

More recent additions are *V. drummondii* (cutting grown from my original plant which couldn't survive my savage pruning for cut flowers), *V. chrysantha* (2), *V. monadelpha* (white), *V. pholidophylla*, *V. brownii* (white and pink forms), *V. mitchelliana*, *V. grandis* and *V. plumosa* (shorter greener leaves)

I also have an unknown (to me) yellow flowered species (4 years old) now 0.3 x 0.2. Branches are upright as are the rather fine yellow-green leaves. This particular plant often appears dead by late January, then revives about March when the sting goes out of our summer. It is a beautiful little plant.

My garden is granitic gravel, topsoil depth varying from nil to 70cm. Average annual rainfall is 670mm, most of which falls between May and November.

We often experience long, hot summers with little rain. In order to retain soil moisture on our sloping site we have used concrete sand, (from finely-crushed river stones), as a sheet mulch to 50mm thickness. This also suppresses weed growth

The recent (3 years or less) Verticordia plantings utilising the sand mulch have generally been successful. They have been intermingled with other low shrubs. Most successful have been *V. monadelpha* (white), *V. pholidophylla* and *V. mitchelliana*. (this plant is beside a large granite rock and in front of a large stack of red house bricks). I suspect the reflected and radiated heat has assisted growth

Tabulation 10.6.95

Species	Year	Origin	Size(m)-H x W	Comments
<i>V. brownii</i> White	2	Commercial	0.15 x 0.1	Dry spot-healthy-slow growing
<i>V. brownii</i> Pink	1	Commercial	0.2 x 0.1	Dry spot-healthy-slow growing
<i>V. chrysantha</i>	3	Self prpght	0.4 x 0.6	Dry spot-full day sun-healthy
<i>V. chrysantha</i>	3	Self prpght	0.3 x 0.3	Mrng shade-healthy-slow growing
<i>V. densiflora</i>	5	Commercial	0.5 x 0.5	Part shade-built up sand-healthy
<i>V. drummondii</i>	3	Self prpght	0.5 x 0.4	Part shade from house-healthy
<i>V. grandis</i>	1	Commercial	0.15 x 0.1	Healthy with new growth
<i>V. mitchelliana</i>	2	Commercial	0.3 x 0.5	Healthy-flrd once-cut hard summer
<i>V. monadelpha</i> Pink	8	Commercial	0.9 x 0.6	West facing gravel bank-healthy
<i>V. monadelpha</i> White	2	Commercial	0.5 x 0.5	Full sun-grwng strongly-flwrtd twice
<i>V. pholidophylla</i>	3	Commercial	0.8 x 0.6	Full sun-grwng strongly-flwrtd twice
<i>V. plumosa</i>	6	Commercial	0.8 x 0.5	Part hidden by Grevillea-healthy
<i>V. plumosa</i> Short Leaf	1	Commercial	0.7 x 0.4	Full sun-grwng strongly-flwrtd once

A number of items in Ray's report are of particular interest and warrant special comment. Firstly I would refer to his basic soil type; granitic gravel. This is the first report I have received of Verticordia responses to growing in this medium and it will be very interesting to receive more follow-up information on same. I recall two observations quoted in "Australian Plants" many years back. The first relates to satisfactory establishment of *V. grandis* in a high percentage gravel medium. In my own garden best results to date with this and several other Verticordia species have been achieved in an elevated bed of very high gravel content.

The second observation was that many Western Australian plants were more easily maintained in soils of granitic parentage. I noted early in Ray's report that he uses the phrase "longest surviving Verticordias" and moreover that his garden is in a predominantly winter-wet area. While I believe this should make life a little easier for many Verticordias, his tabulated comments of all species quote healthy growth and it would appear that the soil type is proving very satisfactory. Perhaps the reference to surviving species may need further clarification.

His reference to a form of *V. plumosa* which recovers in autumn from a post-flowering appearance of demise seems characteristic of many forms or varieties of this species under dry summer conditions. The tolerance of partly shaded conditions is also characteristic.

The loss of *V. drummondii* after hard pruning for flowers also strikes a personal chord with me. I have found on several occasions that both this species and closely related *V. attenuata* will tolerate limited pruning for flowers but after flowering are best left alone until new growth starts late in autumn.

Ray's plant of *V. mitchelliana* seems well sited in a warm microclimatic situation. This is a very difficult species to maintain in good foliage in more humid, near-coastal locations.

My final comment relates to the naming of a few of his species. Prior to Alex. Georges recent revision of the genus great confusion reigned in this regard and probably no group of Verticordias were as affected as the many yellows. While *V. chrysantha* is still a currently accepted species name, a closely related species now named *V. chrysanthella* has been much more widely grown to date. While Ray's naming as *V. chrysantha* may well be correct, I would guess it more likely that he is actually growing *V. chrysanthella*, a more rounded and multi-branched shrub. Prior to the Revision, this species was also sometimes sold as *Vert. chrysantha* var. *preissii* or *V. preissii*.

Ray's reference to *V. brownii* white, should almost certainly be changed to *Vert. eriocephala*. The true *V. brownii* has now been reinstated as the pink form which occurs near the South Coast in W.A. I will be interested to hear from Ray in due course, as to whether and how long *V. eriocephala* takes to reach flowering stage. In Sydney the species has been rather slow growing and difficult to flower.

Finally I would question Ray's naming of *V. drummondii*, as a form of *V. attenuata* has been widely grown in Eastern Australia for some years under the former name. While the two species are very closely related, there are two readily apparent differences. The petals of *V. attenuata* are markedly narrowed towards their few-fimbriate apices and the flowering commences

from middle to late autumn.(April). The petal apices of *V. drummondii* are much broader with many more fimbriae and the flowering commences in late spring or early summer.

A brief report from **Gordon Curtis**, Happy Valley, South Australia, dated 3.10.94, was held over from the February Newsletter. Gordon says:-

"I am busy at the moment getting ready to drive to Perth so will be able to see what the dry conditions have done to the wildflowers. A number of *Verticordia* species which have adapted to my garden conditions are displaying a nice lot of blooms or buds.

Verticordias chrysantha, plumosa, halophila, monadelpha, staminosa, mitchelliana and *pulchella* have proven easy to multiply from cuttings and grow on in the garden.

I have one *Vert. grandis* about 1 metre high established in the garden for 3 years. So far it has similar leaf colouring and flowering to plants in the wild. (Other plants of this species just exist, with occasional flowering). At least I can get good cutting material so I am gradually building up numbers.

I tried the yeast treatment on a number of species but so far there has been no noticeable effect.

I have a number of *Verticordia picta* established in pots which will flower well. I collected the seed from the Wongan Hills area and managed to germinate a few and grow them on. I hope to get more information on germination of native seed by smoke treatment while I am in the West."

Gordon's comments on *Vert. grandis* are of particular interest in that he seems to be having a reasonable degree of success with cutting propagation from his well-established garden plant. I have found the species difficult to strike with cuttings taken from garden specimens but a little easier from potted specimens held in controlled conditions such as in the glass house.

His comment on the yeast treatment, suggested originally by B.C.Kowald from Katanning, W.A., which I quoted in Newsletter No.20, is in line with several others I have received and in fact echos my own experience. I believe then we should, failing further evidence, regard it with some degree of question

Kerrie Rathie, Greenbank, Queensland (8.2.95), also makes reference to the very dry conditions with which we have all had to contend for the last few years. Kerry says:-

"The drought in my area has been severe. The year of lowest rainfall in 130 years of records was 1994, followed by 1993. Temperatures this last week included three successive days of 41C, 41.5C and 42.5C, (plus humidity)- Brisbane doesn't come any hotter. Brisbane proper is always cooler and a lot wetter in dry times.-----

No *verticordia* casualties on my gravel mound, but of course there would have been had I not been watering, as there have been several 2 to 3 month periods of nil rainfall. Grafted *Vert. chrysantha*, (on to *Darwinia citriodora*) flowered well last spring, as also did *Vert densiflora* on it's own roots in the gravel mound and *Vert. plumosa*

I had lost all my *Vert. cunninghamii*, so last summer I asked my nephew in Darwin to send me some more seedlings. Of 25 or so up to 14" tall, over 20 survived transplanting and grew well until late autumn. Brisbane had more bleak days than usual by far last winter with a frost virtually every day in July although none were particularly severe. Whereas usually frosty days are bright and sunny by 9. a.m. and often quite hot, most last winter stayed cold and fairly overcast.. Almost all my *V. cunninghamii* were in frost-free sheltered spots and I gave Merv. Hodge a couple as he is warmer than me.

By mid-July every *V. cunninghamii* I had was dead plus those at Merv's so I've written it off as a possible grafting rootstock for our area."

I was very pleased to receive the above report from Kerrie as *Verticordia* growing results from his area have been virtually non-existent to date. The fact that he has several doing well is a

good starting point and hopefully we will soon hear more good reports with additional species. I feel he is on the right track in growing on mounded gravel as Brisbane's summer rainfall conditions could be troublesome from root-rot in particular.

His experiences with *Vert. cunninghamii* are very interesting, but unfortunately one might be a little optimistic in expecting too much from it in southern states. Kerrie gave me a small plant several years ago but unfortunately it refused to make progress, even under glasshouse conditions. Gordon Brooks also succeeded in germinating one from seed collected in Arnhem Land. He made the mistake of entrusting it to me for good keeping and I am afraid it also went the way of all good *Vert. cunninghamiis*.

I do recall some 10 or 12 years ago however seeing it in flower at the Royal Botanic Gardens in Canberra where it was growing as a bench plant in a large pot under glass house conditions. Rather than being a tall shrub or small tree it was less than 30cm high and tended to sprawl laterally and hang down. I was given a little cutting material but did not succeed in striking it.

As noted earlier **David Andrews** has unfortunately found it necessary to discontinue his Study Group membership but has offered to try repotting some of his established Verticordias into large containers. David's Verticordia Garden has been grown in an elevated bed of freely draining sand over a heavy loam base and the plants are now from two to six or seven years old. It will be interesting to see what success he has with the exercise. Sydney's July weather has been very cold and dry this year and David reports three heavy frosts on consecutive days last week I noted with interest that only one species, *V. hughanii* had been affected and that not very seriously.

Following is a list of his species with comments as appropriate:-

<i>Vert. fragrans</i>	Currently very good.
<i>Vert. halophila</i>	Flowered well-currently very good
<i>Vert. hughanii</i> (2)	Slight recent frost bite but otherwise good-compact
<i>Vert. staminosa</i> subsp. <i>cylindracea</i> var. <i>erecta</i>	Lost from wind damage
<i>Vert. densiflora</i>	Lost after 7 years- had been very vigorous. He feels the species probably better suited by heavier soil.
<i>Vert. plumosa</i>	7 years-Currently very good-flowering.
<i>Vert. oxylepis</i>	Recently removed-very slow growth but reasonably healthy- root penetration not extensive- about 225 cm.
<i>Vert. staminosa</i> subsp. <i>staminosa</i>	Lost last summer
<i>Vert. attenuata</i>	Currently good after recovery from 50% foliage die-back
<i>Vert. polytricha</i>	Currently very good- flowers almost continuously.

Verticordias in **Pat Kenyon & Ted Newman's** garden, Dural N.S.W have now been established for almost a year and although a few have been lost from rabbit attack and other reasons, many are doing particularly well despite the extraordinarily dry periods of the second half of last year and the current winter when frosts, furthermore have been recorded (many severe) during virtually the whole of July. I have been particularly interested in several of the rounded leaved species' response to the loamy type soil, the fully exposed situation and the lack of artificial watering or other special treatments, as performances of these in many gardens, including my own have been, to say the least, a little "iffy". *V. fragrans* continues to do very well. *V. etheliana* var. *etheliana* has maintained healthy foliage despite the very cold winter although not unexpectedly the growth rate is slower than for the above. *V. muelleriana* var. *muelleriana* has been a little slow but has remained healthy. With the advent of the cold winter conditions the older foliage has dropped but good new growth has now started.